

AMENDMENTS TO THE CLAIMS

Please replace all prior versions of the claims with the following listing of the claims. Please note that in the amendments to the claims, deletions are indicated by strikethrough (e.g. ~~deletion~~) and additions to the claims are underlined (e.g. addition).

1. **(Currently amended)** A dental implant for supporting a dental restoration in a jawbone, the dental implant comprising:

a body extending along a longitudinal axis and having a coronal end and an apical end, the coronal end forming, in part, a coronal surface that extends generally transverse to the longitudinal axis and the apical end, in part, forming an annular surface that extends generally transverse to the longitudinal axis;

an external surface extending between the coronal surface and the annular surface and generally facing away from the longitudinal axis of the dental implant, the external surface including a threaded surface that extends substantially to the apical end of the body;

a first inner surface concentric with the external surface, the first inner surface generally facing toward the longitudinal axis of the dental implant, at least a portion of the first inner surface including internal grooves in the first inner surface that do not extend completely through the body to the external surface, the first inner surface defining an opening facing in an apical direction; and

a second inner surface that intersects with the first inner surface along an outer circumference of the second inner surface and extends generally transverse to the longitudinal axis of the dental implant and faces in a generally apical direction;

wherein the dental implant is sized and configured to be implanted in a patient's jawbone.

2. **(Previously presented)** The dental implant according to claim 1, further comprising a stop mark disposed along the external surface for defining an end position for the dental implant at insertion into the jawbone wherein the stop mark is formed by a shoulder which can be engaged with the bone tissue.

3. **(Previously presented)** The dental implant according to claim 2 wherein the shoulder is formed by the end wall portion.

4. **(Previously presented)** The dental implant according to claim 3, wherein the shoulder is formed toward the coronal end.

5. **(Canceled)**

6. **(Previously presented)** The dental implant according to claim 1 wherein the threaded surface includes double threading.

7-16. **(Canceled)**

17. **(Previously presented)** The dental implant according to claim 1, wherein the internal grooves on the first inner surface form a threaded surface.

18. **(Canceled)**

19. **(Canceled)**

20. **(Previously presented)** The dental implant according to claim 1, wherein the internal grooves are micro threads.

21. **(Previously presented)** The dental implant according to claim 1, in combination with a trephine drill.

22. **(Previously presented)** The dental implant according to claim 1, wherein the internal grooves extend in a vertical direction parallel to the longitudinal axis.

23. **(Currently amended)** A method of installing a dental implant for supporting a dental restoration in a jawbone, the dental implant comprising:

inserting the implant into a patient's jawbone, the implant comprising:

a body extending along a longitudinal axis and having a coronal end and an apical end, the coronal end forming, in part, a coronal surface that extends generally transverse to the longitudinal axis and the apical end, in part, forming an annular surface that extends generally transverse to the longitudinal axis;

an external surface extending between the coronal surface and the annular surface and generally facing away from the longitudinal axis of the dental implant, the external surface including threads that extend along the external surface about a longitudinal axis of the implant;

a first inner surface concentric with the external surface, the first inner surface generally facing toward the longitudinal axis of the dental implant, at least a portion of the first inner surface including grooves that form a grooved surface, the grooves not extending through the body of the implant to the external surface, and the first inner surface defining an opening facing in an apical direction; and

a second inner surface that intersects with the first inner surface along an outer circumference of the second inner surface and extends generally transverse to the longitudinal axis of the dental implant and faces in a generally apical direction[[:]]

~~wherein the threads on the external surface extend to the apical end of the dental implant and the grooved surface extends longitudinally from the apical end toward the coronal end of the dental implant, wherein at least a portion of the threads on the external surface overlap at least a portion of the grooves on the first inner surface in the longitudinal direction.~~

24. **(Currently amended)** The ~~dental implant~~ method according to claim 23, wherein the implant further comprising comprises a stop mark disposed along the external surface for defining an end position for the dental implant at insertion into the jawbone wherein the stop mark is formed by a shoulder which can be engaged with the bone tissue.

25. **(Currently amended)** The ~~dental implant~~ method according to claim 24 wherein the shoulder is formed by the end wall portion.

26. **(Currently amended)** The ~~dental implant~~ method according to claim 25, wherein the shoulder is formed toward the coronal end

27. **(Currently amended)** The ~~dental implant~~ method according to claim 23 wherein the threads on the external surface includes double threading.

28. **(Canceled)**

29. **(Canceled)**

30. **(Canceled)**

31. **(Currently amended)** The ~~dental implant~~ method according to claim 23, wherein grooves on the first inner surface form a threaded surface.

32. **(Canceled)**

33. (Canceled)
34. (Currently amended) The ~~dental implant~~ method according to claim 23, wherein the grooves are micro threads.
35. (Currently amended) The ~~dental implant~~ method according to claim 23, wherein installing the dental implant is in combination with a trephine drill.
36. (Currently amended) The ~~dental implant~~ method according to claim 23, wherein the grooves extend in a vertical direction parallel to the longitudinal axis.
37. (Previously presented) The dental implant according to Claim 1, in combination with a dental component.
38. (Previously presented) The dental implant according to Claim 37, wherein the dental component is a tooth prosthesis.
39. (Previously presented) The dental implant according to Claim 37, wherein the dental component is a crown.
40. (Canceled)
41. (Previously presented) The dental implant according to Claim 37, wherein the dental component is a prosthetic component.
42. (Canceled)
43. (Previously presented) The dental implant of Claim 1, wherein the implant has a length of between about 2 to about 16 millimeters.
44. (Previously presented) The dental implant of Claim 1, wherein the implant has a length of between about 3 to about 8 millimeters.
45. (Previously presented) The dental implant of Claim 1, wherein the first inner surface has a cone shape.
46. (Previously presented) The dental implant of Claim 1, wherein the first inner surface has a cylindrical shape.
47. (Previously presented) The dental implant of Claim 1, wherein the external surface includes a side surface between the threaded surface and the coronal end.
48. (Previously presented) The dental implant of Claim 47, wherein the side surface includes grooves or ridges.

49. **(Previously presented)** The dental implant of Claim 1, wherein the grooves are horizontal.

50. **(Canceled)**

51. **(Currently amended)** The ~~dental implant~~ method according to Claim 23, wherein installing the dental implant is in combination with a dental component.

52. **(Currently amended)** The ~~dental implant~~ method according to Claim 51, wherein the dental component is a crown.

53. **(Canceled)**

54. **(Currently amended)** The ~~dental implant~~ method according to Claim 51, wherein the dental component is a tooth prosthesis.

55. **(Currently amended)** The ~~dental implant~~ method according to Claim 51, wherein the dental component is a prosthetic component.

56. **(Canceled)**

57. **(Currently amended)** The ~~dental implant~~ method of Claim 23, wherein the implant has a length of between about 2 to about 16 millimeters.

58. **(Currently amended)** The ~~dental implant~~ method of Claim 23, wherein the implant has a length of between about 3 to about 8 millimeters.

59. **(Currently amended)** The ~~dental implant~~ method of Claim 23, wherein the first inner surface has a cone shape.

60. **(Currently amended)** The ~~dental implant~~ method of Claim 23, wherein the first inner surface has a cylindrical shape.

61. **(Currently amended)** The ~~dental implant~~ method of Claim 23, wherein the external surface includes a side surface between the threaded surface and the coronal end.

62. **(Currently amended)** The ~~dental implant~~ method of Claim 61, wherein the side surface includes grooves or ridges.

63. **(Currently amended)** The ~~dental implant~~ method of Claim 23, wherein the grooves are horizontal.

64. **(Canceled)**

65. **(Currently amended)** A dental implant for supporting a dental restoration in a jawbone, the dental implant comprising:

a body extending along a longitudinal axis and having a coronal end and an apical end, the coronal end forming, in part, a coronal surface that extends generally transverse to the longitudinal axis and the apical end, in part, forming an annular surface that extends generally transverse to the longitudinal axis;

an external surface extending between the coronal surface and the annular surface and generally facing away from the longitudinal axis of the dental implant, the external surface including threads that extend along the external surface around a longitudinal axis of the implant;

a first inner surface concentric with the external surface, the first inner surface generally facing toward the longitudinal axis of the dental implant, at least a portion of the first inner surface including grooves that form a grooved surface, the grooves not extending through the body of the implant to the external surface, the first inner surface defining an opening facing in a generally apical direction;

a second inner surface that intersects with the first inner surface along an outer circumference of the second inner surface and extends generally transverse to the longitudinal axis of the dental implant and faces in the generally apical direction; and

a dental component coupled to the coronal end of the implant.

~~a third inner surface concentric with the external surface, the third inner surface generally facing toward the longitudinal axis of the dental implant, at least a portion of the third inner surface including threads; and~~

~~a fourth inner surface that intersects with the third inner surface along an outer circumference of the fourth inner surface and extends generally transverse to the longitudinal axis of the dental implant and faces in a generally coronal direction.~~

66. **(Previously presented)** The dental implant according to Claim 65, further comprising a stop mark disposed along the external surface for defining an end position for the dental implant at insertion into the jawbone wherein the stop mark is formed by a shoulder which can be engaged with the bone tissue.

67. **(Previously presented)** The dental implant according to Claim 66, wherein the shoulder is formed by the end wall portion.

68. **(Previously presented)** The dental implant according to Claim 67, wherein the shoulder is formed toward the coronal end.

69. **(Previously presented)** The dental implant according to Claim 65, wherein the threads on the external surface includes double threading.

70. **(Canceled)**

71. **(Previously presented)** The dental implant according to Claim 65, wherein the length of the implant is substantially equal to the diameter.

72. **(Previously presented)** The dental implant according to Claim 65, wherein the implant has a diameter, which is larger than its length.

73. **(Previously presented)** The dental implant according to Claim 65, wherein grooves on the first inner surface form a threaded surface.

74. **(Canceled)**

75. **(Previously presented)** The dental implant according to Claim 73, wherein the threads on the first inner surface are micro threads.

76. **(Previously presented)** The dental implant according to Claim 65, wherein the grooves are micro threads.

77. **(Previously presented)** The dental implant according to Claim 65, in combination with a trephine drill.

78. **(Previously presented)** The dental implant according to Claim 65, wherein the grooves extend in a vertical direction parallel to the longitudinal axis.

79. **(Canceled)**

80. **(Currently amended)** The dental implant according to Claim [[79]] 65, wherein the dental component is a tooth crown.

81. **(Canceled)**

82. **(Currently amended)** The dental implant according to Claim [[79]] 65, wherein the dental component is a tooth prosthesis.

83. **(Canceled)**

84. **(Previously presented)** The dental implant of Claim 65, wherein the implant has a length of between about 2 to about 16 millimeters.

85. **(Previously presented)** The dental implant of Claim 65, wherein the implant has a length of between about 3 to about 8 millimeters.

86. **(Previously presented)** The dental implant of Claim 65, wherein the first inner surface has a cone shape.

87. **(Previously presented)** The dental implant of Claim 65, wherein the first inner surface has a cylindrical shape.

88. **(Previously presented)** The dental implant of Claim 65, wherein the external surface includes a side surface between the threaded surface and the coronal end.

89. **(Previously presented)** The dental implant of Claim 88, wherein the side surface includes grooves or ridges.

90. **(Previously presented)** The dental implant of Claim 65, wherein the grooves are horizontal.

91. **(Canceled)**

92. **(New)** The method of Claim 23, wherein the threads on the external surface extend to the apical end of the dental implant and the grooved surface extends longitudinally from the apical end toward the coronal end of the dental implant, wherein at least a portion of the threads on the external surface overlap at least a portion of the grooves on the first inner surface in the longitudinal direction.

93. **(New)** The dental implant of Claim 65, further comprising:

a third inner surface concentric with the external surface, the third inner surface generally facing toward the longitudinal axis of the dental implant, at least a portion of the third inner surface including threads; and

a fourth inner surface that intersects with the third inner surface along an outer circumference of the fourth inner surface and extends generally transverse to the longitudinal axis of the dental implant and faces in a generally coronal direction.

94. **(New)** The dental implant of Claim 65, wherein the dental component is a restoration.

95. **(New)** The dental implant of Claim 65, wherein the dental component is an abutment.

96. (New) A dental implant for supporting a dental restoration in a jawbone, the dental implant comprising:

a body extending along a longitudinal axis and having a coronal end and an apical end, the coronal end forming, in part, a coronal surface that extends generally transverse to the longitudinal axis and the apical end, in part, forming an annular surface that extends generally transverse to the longitudinal axis;

an external surface extending between the coronal surface and the annular surface and generally facing away from the longitudinal axis of the dental implant, the external surface including a threaded surface that extends substantially to the apical end of the body;

a first inner surface concentric with the external surface, the first inner surface generally facing toward the longitudinal axis of the dental implant, at least a portion of the first inner surface including internal grooves in the first inner surface that do not extend completely through the body to the external surface, the first inner surface defining an opening facing in an apical direction; and

a second inner surface that intersects with the first inner surface along an outer circumference of the second inner surface and extends generally transverse to the longitudinal axis of the dental implant and faces in a generally apical direction;

wherein the external surface of the body has a micro topography which promotes bone formation.